**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

TIERRA INTELECTUAL BORINQUEN, INC. Plaintiff v. HTC CORPORATION et al., Defendants	CASE NO. 2:13-cv-39-JRG **CONSOLIDATED LEAD CASE**
TIERRA INTELECTUAL BORINQUEN, INC. Plaintiff, v. TOSHIBA CORPORATION, et. al., Defendants	CASE NO. 2:13-cv-47-JRG

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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I.   INTRODUCTION

Defendants HTC Corporation, HTC America, Inc. (together, "HTC"), Toshiba Corporation, and Toshiba America Information Systems, Inc. (together, "Toshiba") (collectively, "Defendants") respectfully submit this brief in support of their proposed constructions for the disputed claim terms. The Court should adopt Defendants' constructions because they are supported by the intrinsic evidence, particularly the language of the claims themselves, and properly capture the meaning of the claim terms as would have been understood by one of skill in the art at the time of the invention. By contrast, Plaintiff Tierra Intelectual Borinquen, Inc.'s ("TIB") constructions ignore the claim language and fail to account for the meaning ascribed to certain terms in the specification.

II.   BACKGROUND

The asserted patents, U.S. Patent Nos. 7,350,078 (the "'078 patent"), 7,725,725 (the "'725 patent"), and 8,429,415 (the "'415 patent") (collectively the "asserted patents"), relate to signature creation and authentication for gaining secure access to a computing device. The asserted independent claims of the patents-in-suit cover two purported inventions: (1) a method or process for creating a signature for subsequent authentication ('078 patent, claims 1 and 9; '725 patent, claims 1, 10, and 15) and (2) a computing device for providing secure access to the device ('415 patent, claim 1). The '415 patent is a continuation of the '725 patent, which is a continuation of the '078 patent. All three patents share an effectively identical specification.

A.   Signature Creation Method Claimed in the '078 and '725 Patents

The '078 and '725 patents describe a method for creating a signature that can be used for subsequent user authentication. The asserted independent claims focus solely on the creation of a signature—not the subsequent authentication. The asserted independent claims require a number of steps to create a signature, including: (1) recording user input signals by type from a

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user-selected input device; (2) creating the signature based on the recording; and (3) storing the signature.

The claims require the user to select an input device, through which a user enters input into the device. *See, e.g.*, '078 patent, claim 1 ("recording user input signals by type from at least one user-selected device among a plurality of selectable user input devices . . ."). The specification teaches that the user's input into the input device is a transmission. '078 patent, 3:16-19 ("A transmission 1 is user input into the computer 100 via one or more input devices 106, whereupon termination of transmission 1 is recognizable, and resulting in at least one signal 2."). The specification further teaches that there can be different types of transmissions from different user input devices, such as mouse movements or clicks, keyboard entry, voice transmissions, or a combination of any of the foregoing. *See* '078 patent, 3:19-24.

The termination of a single transmission results in a signal. *See* '078 patent, 3:16-19 ("A transmission 1 is user input into the computer 100 via one or more input devices 106, **whereupon termination of transmission 1 is recognizable**, and **resulting in at least one signal 2.**") (emphasis added); 3:29-30 ("A signal 2 is a set of related software-recognizable data **from a single transmission 1**.") (emphasis added). Similar to the types of transmissions, a signal can be of a variety of types. *See* '078 patent, 3:30-32. For example, the termination of a keyboard entry transmission may result in the following signals: (1) entered keys or (2) the timing between keystrokes, which are different signal types. *See* '078 patent, 3:32-33. In addition, the termination of a mouse movement transmission may result in the signals of location, duration, velocity, or shape of the mouse movement, which are each distinct signal types. *See* '078 patent, 3:34-37. Importantly, the specification makes clear that the transmission type and signal type are distinct, and, therefore, a signal type is not the same thing as a transmission type. *See* '078

patent, 3:30-37; 44-47; 4:4-8; and FIG. 5.

After the termination of the user input (*i.e.*, at the termination of the transmission), the resulting signals are recorded by signal type. *See* '078 patent, claims 1 and 9; '725 patent, claims 1, 10, and 15. The signature is then created based in part on the recording. *See id.* Finally, the signature is stored. *See id.*

B.   Computing Device for Signature Creation and Authentication Claimed in the '415 Patent

The '415 patent claims a computing device that comprises instructions for creating a reference signature and using that reference signature for subsequent user authentication. The computing device comprises two user-selectable input devices, data storage memory, and program memory. *See* '415 patent, claim 1. A first set of instructions stored in program memory allows a user to select a signal type associated with one of the user-selectable input devices. *See id.* A second set of instructions causes: (1) input data from the user-selected input device to be generated and recorded in data storage memory; (2) a reference signature to be created that comprises at least a portion of the input data that was recorded in data storage memory; and (3) a reference signature to be stored in data storage memory. *See id.* A third set of instructions stored in program memory retrieves the reference signature from the data storage memory and compares it to a subsequent signature submission signal to determine whether to grant access to the computing device. *See id.*

III.   APPLICABLE LAW

"[I]n interpreting an asserted claim, the court should look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). "Such intrinsic evidence is the most significant source of the legally operative meaning of

disputed claim language." *Id*.

"Claim construction analysis begins with the claim language itself." *Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Inc.*, 222 F.3d 951, 955 (Fed. Cir. 2000). The words of a patent claim "are generally given their ordinary and customary meaning." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (citations omitted). This is the meaning they would have to a person of ordinary skill in the art in view of the intrinsic evidence, *i.e.*, the claims, the specification, and the prosecution history. *Id*. at 1313. Thus, one starts with the "words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention." *Vitronics Corp.*, 90 F.3d at 1582. All of the words of a claim are meaningful, and, therefore, it is improper to remove a feature or word of a claim limitation from a construction. *See Randall May Int'l, Inc. v. DEG Music Prods., Inc*. 378 Fed. Appx. 989, 997-98 (Fed. Cir. 2010).

"Although words in a claim are generally given their ordinary and customary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history." *Vitronics Corp.*, 90 F.3d at 1582. The Federal Circuit "recognize[s] that the specification may reveal a special definition given to a claim term by the patentee" and that "[i]n such cases, the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316. A construction "that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Id*. (quoting *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

Where the patent does not define a claim term implicitly or explicitly, however, it is appropriate to consider dictionary definitions of the term. *See Phillips*, 415 F.3d at 1322 ("Dictionaries or comparable sources are often useful to assist in understanding the commonly

understood meaning of words and have been used both by our court and the Supreme Court in claim interpretation."). Beyond dictionary definitions, "extrinsic evidence in the form of expert testimony can be useful to a court for a variety of purposes, such as to provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." *Phillips*, 415 F.3d at 1318.

IV.   AGREED CLAIM TERMS

The parties have agreed on the following constructions:

Term to be Construed	Claims	Agreed Construction
"signature"	**'078**: 1, 4, 5, 8, 9, 13, 14 **'725:** 1, 4, 9, 10, 11, 14-17, 19 **'415**: 1, 5, 11, 12	"at least one transmission intended as a security precaution to preclude unauthorized access"
"input device"	**'078**: 1, 3, 9 **'725:** 1, 10, 15, 19 **'415**: 1, 8, 13	"a device by which a user enters input into a computer system"
"passively terminating"	**'078**: 4 **'725:** 12	"stopping without overt user action when a predetermined condition is met"
"same type"	**'078**: 1 **'725:** 1, 10, 15	No construction is necessary.
"predetermined degree of inexactness" / "designated tolerance of inexactness"	**'078**: 5, 13 **'725**: 4, 14 **'415**: 5	"a preset allowable measure of deviation from the recorded signal"
"a set of related software-recognizable data"	**'078**: 1 **'725**: 1, 10, 15	No construction is necessary.

V.   DISPUTED CLAIM TERMS

A.   "signal"/ "signals"[1]

Defendants' Proposed Construction	TIB's Proposed Construction
A set of related software-recognizable data of the same type which results at the termination of a single user input into the computer via the input device	A set of [related software-recognizable data] which results from user input onto the computer via the [input device]

The parties agree that a "signal" is a set of related software-recognizable data that results from user input into the computer via the input device (*i.e.*, a set of related software-recognizable data that results from a transmission).   The only remaining disputes are whether the related software-recognizable data (1) must be of the **same type**; and (2) results **at the termination of a single user input** into the computer via the input device (*i.e.*, results at the termination of a single transmission).

Defendants' proposed construction "stays true to the claim language and most naturally aligns with the patent's description of the invention." *See Phillips*, 415 F.3d at 1316.   Indeed, Defendant's proposed construction is rooted in the intrinsic record, including the ordinary meaning of the claim language itself and the specification.   In contrast, TIB asks the Court to ignore the plain language of the claims and the teachings of the specification.

1.   A "Signal" is "A Set of Related Software Recognizable Data *Of the Same Type*."

In construing "signal," the Court should first look to the claim language itself. *See Hockerson-Halberstadt, Inc.*, 222 F.3d at 955. Here, the Court does not need to look beyond the claim language to determine that a "signal" is "a set of related software-recognizable data **of the**

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[1] The term "signal" appears in the following asserted claims: Claims 1, 2, and 4 of the '078 patent; claims 1, 2, 7, 9, 10, 11, 15-17, and 19 of the '725 patent; claim 1 of the '415 patent.

same type . . . ." *See* '078 patent, claim 1; '725 patent, claims 1, 10, and 15 ("wherein a signal

comprises a set of related software-recognizable data of the same type received from at least one

input device"). TIB's proposed construction is improper because it ignores the plain language of

the claims, which requires the related software-recognizable data be of the same type. Therefore,

the Court should construe "signal" as the patentee has defined it in the claims to be "a set of

related software recognizable date **of the same type.**"

> **2.**   **"A Signal" Results *at the Termination of a Single User Input* into the
>   Computer Via the Input Device, *i.e.*, Results at the Termination of a
>   Single Transmission.**

The claim language further defines a signal as "a set of related software-recognizable

data of the same type **received from at least one input device**." *See* '078 patent, claim 1; '725

patent, claims 1, 10, and 15 (emphasis added). The patentee teaches what it means to be

"received from at least one input device," such that a signal results at the termination of a single

transmission into the input device. Indeed, the patentee defined "transmission" as "user input

into the computer 100 via one or more input devices 106, **whereupon termination of**

transmission 1 is recognizable, and **resulting in at least one signal 2**." '078 patent, 3:16-19

(emphasis added). This makes clear that a signal results upon termination of a transmission, or,

in other words, at the termination of user input into the computer via the input device. And the

specification explicitly defines a "signal" as resulting at the termination of a **single** transmission:

"A signal 2 is a set of related software-recognizable data **from a single transmission** 1." '078

patent, 3:29-30.

Significantly, this point is not disputed by TIB. In fact, TIB argued in its brief that "the

plain language of the specification make it clear that the signal is 'a set of related software-

recognizable data from a **single** transmission.'" TIB's Opening Brief, Dkt. No. 93 at 10

(emphasis added). Therefore, the intrinsic record makes clear, and the parties agree, that a

"signal" results from a **single** transmission, or, in other words, at the termination of a single user input into the computer via the input device.

Although the parties apparently agree that a signal results from a single transmission, TIB's construction fails to include this limitation.   Moreover, TIB's proposed construction disregards the teachings of the specification that a "signal" results at the termination of a single transmission. *See* '078 patent, 3:16-19. TIB further disregards the plain language of the claims requiring that the related software-recognizable data must be of the same type.   *See* '078 patent, claim 1; '725 patent, claims 1, 10, and 15. Therefore, the Court should disregard TIB's proposed construction and adopt Defendants' construction, which is supported by the explicit language of the specification and consistent with the plain language of the claims.

B.   **"measurable variable input"[2]**

Defendants' Proposed Construction	TIB's Proposed Construction
HTC: No construction necessary **Toshiba:** A variable quantity that can be measured, in contrast to a discrete quantity or condition that can be identified exactly	A quantity, property, or condition that is measurable from an [input device]

1.   **HTC's Construction**

HTC contends that no construction is necessary for "measurable variable input" because the words themselves have a plain and ordinary meaning and are easily understood by a jury. The Court should not adopt TIB's or Toshiba's proposed constructions.   When a term is "sufficiently clear for a jury to understand" and a proposed construction "may add needless and potentially confusing complexity," no construction is necessary beyond the ordinary meaning of

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[2] The term "measurable variable input" appears in the following asserted claims: Claims 1 and 9 of the '078 patent; claims 1, 10, and 15 of the '725 patent; claims 13 and 14 of the '415 patent.

the term. *See Pioneer Corp. v. Samsung SDI Co.*, C.A. No. 2:07-cv-170, 2008 WL 4831319 at *13‑14 (E.D. Tex. Mar. 10, 2008) (J. Folsom).

Further, both TIB's and Toshiba's constructions simply restate the "measurable" limitation, such that the input is "measurable" or "can be measured." Similarly, Toshiba's construction merely restates the word "variable." And because TIB's proposed construction, reads out the word "variable," TIB has improperly construed "measurable input" instead of "measurable variable input." *See, e.g.*, *Randall May Int'l, Inc.,* 378 Fed. App'x. at 997-98.

2.   Toshiba's Construction

Toshiba contends that "measureable variable input" should be construed as "a variable quantity that can be measured, in contrast to a discrete quantity or condition that can be identified exactly." The phrase "measureable variable input" appears in each of the asserted independent claims of the '078 and '725 patents, and in dependent claims of the '415 patent. Yet, the specifications of the patents-in-suit do not state what it means to be "measurable" or "variable" in the context of the purported inventions. Indeed, the specifications of the patents-in-suit do not use this phrase. This is because the limitations including "measureable variable input" were added during prosecution to overcome anticipation and obviousness rejections, whereupon the applicant cancelled all of the then-pending claims and provided substitute claims that included this phrase. *See* 12/22/2005 Office Action (rejecting claims over Zilberman, McKeeth, and other references) (Scott Decl., Ex. 1 at 83-97); 1/17/2006 Request for Continued Examination ("Largely agreeing with Examiner's previous rejections with regard to deficiencies in claim drafting, applicant has canceled all previously pending claims, and drafted new claims with careful regard to definiteness and novelty over the prior art.") (Scott Decl., Ex. 2 at 2).

Due to the lack of explicit guidance from the specification on the meaning of "measurable variable input," it must be inferred from the claims, the context of the invention as

described in the specification, and the description of the disclosed embodiments (including relevant figures). *See Phillips*, 415 F.3d at 1315 (Fed. Cir. 2005) (en banc) ("[C]laims must be read in view of the specification, of which they are a part." (internal quotations omitted)); *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1351 (Fed. Cir. 2006) (construction based on dictionary definitions that was consistent with single embodiment disclosed in specification was correct given it was how the term would be understood by a person of ordinary skill in the art and the specification did not provide other guidance for the scope of the term).

The asserted claims use the phrase "measurable variable input" to describe a type of input that is used in the claimed methods for creating a signature. For example, claims 1 and 9 of the '078 patent and claims 1 and 10 of the '725 patent recite "wherein a signal type comprises a category of measurable variable input associated with at least one user-selectable input device . . . ." *See also* '725 patent, claim 10 ("creating a signature using said stored recorded user input signals from a plurality of categories of measureable variable input; . . ."); '725 patent, claim 15 ("wherein a signal type comprises distinct measureable variable input associated with at least one user-selectable input device, . . ."); '415 patent, claim 13 ("wherein the signal type comprises a category, among at least two possible categories, of measureable variable input associated with at least one of the first and second user selectable input devices."); '415 patent, claim 14 ("wherein the signal type comprises a category of measurable variable input that arises from a user's interaction with a keyboard."). From the claims alone, one cannot distinguish what is meant by "measureable variable input," as opposed to any other kind of "input."

The specification describes the context of the invention, including the prior art leading up to the invention, and contrasts it with the claimed methods. The specification provides that "*[h]istorically*, an account name would be an identification 3, and a password a signature

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4." '078 patent, 3:5-6 (emphasis added). With respect to account identification, the specification describes the invention in contrast to the prior art: "Identification 3 is at least one transmission 1 of an account identifier. *Historically*, identification 3 has been a keyed-in account name. *Employing the invention*, identification 3 comprises at least one signal 2 from at least one transmission 1. A transmission table, algorithmic method, or other software-determined protocol, with or without encryption 14, may be employed if identification 3 or signature 4s *does not represent the actual account identifier*."   '078 patent, 3:57-59 (emphasis added). Thus, the invention is described as using an identification that "does not represent the actual account identifier," namely it is not a "keyed-in account name," but rather, employs "at least one signal" in conjunction with a "transmission table, algorithmic method, or other software-determined protocol" for account identification.

Similarly, with respect to signatures, the specification provides that "[a] signature 4 is at least one transmission 1 intended as a security precaution to preclude unauthorized access 39. *Historically,* a single signal 2 of a single transmission 1 has typically been used for a signature 4, namely a password, which is a signature of a single word of text. A pass-phrase is a signature 4 of a plurality of words of text." '078 patent, 3:65-4:3 (emphasis added). Thus, the specification makes clear that "historically" a keyed-in password or passphrase was used for a signature, just like a keyed-in account name was used for account identification.

The specification further distinguishes between the historical approach and the invention: "*Historically*, validation 18 has required an absolute signal match 5 to input 22: for example, *no deviance from a character-based password has been permitted*."   '078 patent, 4:10-12 (emphasis added). To a person of skill in the art this makes complete sense, because a character-based password results from a user's entry of particular keys on a keyboard that result in a

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discrete, non-variable input that a computer can precisely identify without measurement, and then use for comparison. Chatterjee Decl. ¶ 22-23; *Phillips*, 415 F.3d at 1318 ("We have also held that extrinsic evidence in the form of expert testimony can be useful to a court for a variety of purposes, such as to provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art . . . .").

The specification also contrasts signals where "no deviance" is expected (such as a password of keyed-in text characters), and those that are "difficult-to-exactly-replicate," such as "mouse movements," "keystroke timing," and "mouse click location." *See* '078 patent, 4:10-23. It is evident from the specification that the "difficult-to-exactly-replicate" input signals described in the specification are what the claims refer to as "measurable variable input." The term "variable" is used to describe "variability" in the user's input because the input signal is "difficult-to-exactly-replicate." The term "measureable" in this context suggests the need to "measure" the input to be able to compare it to a reference, as opposed to simply identifying it for what it is, such as for keyed-in text characters where no deviance (i.e., variability) is expected or allowed. *See* Chatterjee Decl. ¶¶ 22-24.

This understanding is also supported by the dependent claims, which add the limitation of "accepting said comparison within a designated tolerance of inexactness" ('078 patent, claims 5, 13; '415 patent, claim 5) or a "predetermined degree of inexactness" ('725 patent, claims 4, 14) to account for the deviance or variability in the input. This additional limitation would be undesirable and make no sense if the independent claims did not require "measureable variable input" (i.e., "difficult-to-exactly-replicate" input signals). '078 patent, 4:10-12 ("Historically,

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validation 18 has required an absolute signal match 5 to input 22: for example, no deviance from

a character-based password has been permitted."); *see also* Chatterjee Decl. ¶¶ 22-24.

In addition to the description above, the only embodiment described in the specification

supports the distinction between discrete/identifiable input signals (such as keyed-in text

characters) and those that are "measureable variable" or "difficult-to-exactly-replicate." As

illustrated in Figures 9 and 10 (reproduced below), and the accompanying text, a user may assign

an "account identifier," including a "[t]ext transmission[] 1 that can be input in the text input

dialog 41 comprising a text input control 42 and acknowledge button 43." Separate and apart

from the text transmission of the account identifier, the "[s]ignature 4 transmission(s) 1 can be

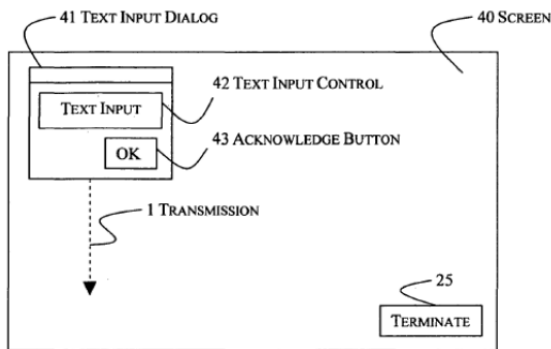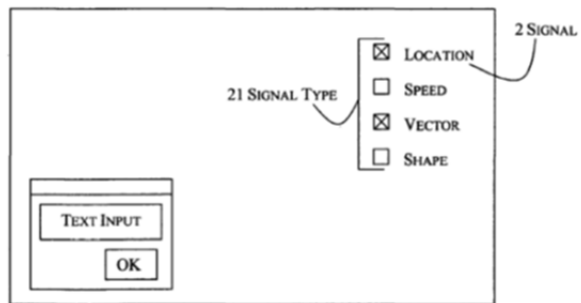input, and input signals 2 recorded."

FIGURE 9

FIGURE 10

The creation of the signature in this embodiment is described in the specification: "FIG.

9 depicts dragging the text input dialog 41 down the screen 40 as a transmission 1 (by pressing

the proper mouse 107 button when the cursor is over an appropriate section of dialog 41, thus

selecting the dialog 41, then moving the mouse 107 while keeping the button pressed). The

dragging action in this example is terminated by a mouse-up (releasing the mouse 107

button)." '078 patent, 4:63-5:3. In a variation of this embodiment shown in Figure 10, "the user

may select, via checkbox controls as shown, which signal types 21 of the transmission 1 depicted

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in FIG. 9 are to be considered for the transmission 1 being recorded. The checkboxes are specific to types of signals 21 appropriate to the type of transmission 11 employed." '078 patent, 5:10-15. In the example above, the checkboxes (for signal type 21 selection) only include input signals that are "measureable variable input" or "difficult-to-exactly-replicate" — such as location, speed, vector, or shape — in contrast to the text-character input that, while present for an optional account identifier, is not one of the signal types that is selectable for generating the signature.

Beyond the context of the invention and the disclosed embodiment, the specification also distinguishes the particular prior art references that formed the basis of the Examiner's rejections just before the applicant proposed claim language including "measurable variable input." In particular, with respect to Zilberman, the specification notes:

> U.S. Pat. No. 6,442,692 [Zilberman] disclosed a special microcontroller embedded within a keyboard. The microcontroller was employed 'to *measure certain characteristics of the user's keystroke dynamics' independent of the typed text*, including the timing, intervals, and durations of key presses and pauses. These *measured characteristics* were then used as integral information for authenticating a user's identity.

'078 patent, 1:21-28 (emphasis added). Thus, the description of the prior art distinguishes between measured keystroke dynamics, as opposed to the typed text input. Like the other descriptions in the specification, this disclosure also supports Toshiba's proposed construction that clearly draws a distinction between measureable variable input, and other input (such as typed text) that is discrete and readily identifiable by the computer.

While the context of the invention, the disclosed embodiment, and the description of the prior art all support the distinction between "measurable variable input" as opposed to "a discrete quantity that can be identified exactly," this distinction is also how a person of ordinary skill in the art would understand this phrase in light of the intrinsic record. Chatterjee Decl. ¶¶ 15-24.

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To a person of ordinary skill in the art, the phrase "measureable variable input" suggests that the input likely results in an analog signal, which is generally understood as a continuous, variable, measureable quantity. *See Phillips*, 415 F.3d at 1322 ("Dictionaries or comparable sources are often useful to assist in understanding the commonly understood meaning of words and have been used both by our court and the Supreme Court in claim interpretation."); Chatterjee Decl. ¶¶ 20-22;[3] Ex. G, Websters II New College Dictionary (1999) at 40 (DEFTIB00001587-89) ("Analog (see Analogue): . . . Adj. Of, relating to, or being a device in which data are represented by *variable measurable physical quantities*." (emphasis added)); Ex. H, Microsoft Computer Dictionary (5th ed. 2002) at 26 (DEFTIB00001584-86) ("Analog: Pertaining to or being a device or signal that is continuously *varying* in strength or quantity, such as voltage or audio, *rather than based on discrete units*, such as the binary digits 1 and 0. A lighting dimmer switch is an analog device because it is not based on absolute settings." (emphasis added)); Ex. F, Merriam Webster's Collegiate Dictionary (10th ed. 1994) at 41 (DEFTIB00001581-83) ("analog computer" means "a computer that operates with numbers represented by directly *measurable quantities* (as voltages or rotations)" (emphasis added));   Ex. D, Random House Kernerman Webster's College Dictionary, 2010 K Dictionaries Ltd., Copyright 2005, 1997, 1991 (DEFTIB00001593-94) ("analog computer" means "a computer that represents data by measurable quantities, as voltages, rather than by numbers. Compare *digital computer*."). Moreover, a person of skill in the art would appreciate that this phrase would not be used to refer to input that resulted in a digital signal, in other words, a discrete input of 1's and 0's that could be exactly identified from the signal as opposed to measured therefrom. *See* Ex. F, Merriam

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[3] The cited dictionary definitions are attached as exhibits to the Declaration of Sandeep Chatterjee, Ph.D.

Webster's Collegiate Dictionary (10th ed. 1994) at 41 (DEFTIB00001581-83); Chatterjee Decl.

¶¶ 20-22; *Mass. Inst. of Tech.*, 462 F.3d at 1351.

Indeed, even TIB recognizes the distinction between "measureable variable input" and

inputs where no deviation is expected (*i.e.*, those that can be identified exactly):

> Certain types of signals are inexact because of their very nature. As discussed with respect to the terms "measurable variable input" and "signal type" the specification discloses the use of shapes, vectors, and locations, among others, for authentication purposes. **Contrary to passwords and passphrases**, **which generally do not allow any type of deviation**, a mouse-drawn shape, for example, will tend to introduce a small, albeit cognizable, difference when compared with the recorded signature.

TIB's Opening Brief, Dkt. No. 93 at 15 (emphasis added).

Despite this recognition, TIB suggests in its Opening Brief that text characters from a

keyboard are "measureable variable input":

> The specification discloses various examples of "measurable" signals. In a keyboard, for example, typing a word may yield signals for the entered keys and the timing between keystrokes. *See*, '078 Patent 3:32-33. In that case, the keys and timing between keystrokes are both "measurable" because they can be measured and converted into signals. The keys and timing between keystrokes are also "variable" because different characters may be used, and the timing of the keystrokes may not be consistent."

TIB's Opening Brief, Dkt. No. 93 at 11.

This discussion is completely at odds with the specification (described above), which

nowhere suggests that key characters themselves are "measureable variable input," and instead

uniformly distinguishes between "difficult-to-exactly-replicate" signals that would qualify as

measurable variable input and those that would not (such as text characters). Indeed, TIB's

proposed construction would provide no guidance to the jury as to what it means to be

"measureable variable input," and in light of TIB's apparent position that discrete inputs such as

key characters should qualify as "measurable variable input," it is readily evident that under

TIB's proposed construction, *any* kind of input would qualify as "measurable variable input."[4]

Instead of clarifying the meaning of "measureable variable input," TIB's proposed construction

adds the language "quantity, property, or condition," even though both a "property" and a

"condition" are suggestive of discrete, identifiable input that would not be "measureable variable

input." TIB's construction also merely repeats the term "measurable," with no explanation as to

what that term means, and fails to account for or explain the term "variable." In sum, TIB's

construction provides no meaningful guidance about the meaning of "measureable variable input."

In contrast, Toshiba's proposed construction will provide guidance to the jury to

understand what is "measurable variable input," and what is not. While the form of Toshiba's

proposed construction is in the form of a contrast, Toshiba asserts that this is appropriate in this

situation because the simplest and most informative way to construe "measurable variable input"

is by drawing a clear distinction between measureable variable input (*i.e.*, difficult-to-exactly-

replicate input that can be measured) and input that is discrete and identifiable without

measurement.

Toshiba further asserts that the court should not adopt HTC's proposal that "measureable

variable input" be left to its plain and ordinary meaning. Toshiba respectfully submits that this

phrase is not something that a jury can be expected to understand without guidance from the

Court, and Toshiba's proposed construction provides this guidance by enumerating the

characteristics of "measureable variable input" and contrasting those characteristics with those of

non-measureable variable input.

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[4] During meet and confer, counsel for Toshiba asked counsel for TIB whether keyed-in text characters would qualify as "measureable variable input," and TIB's counsel responded that they would *not* qualify. This is inconsistent with TIB's brief, quoted above, however, so TIB's position on this issue is unclear.

C.   "signal type"[5]

Defendants' Proposed Construction	TIB's Proposed Construction
A category of measurable variable input associated with the signal received from at least one user-selectable input device	A category of [measurable variable input] associated with at least one user-selectable [input device]

Defendants agree with TIB that the term "signal type" should be construed the same way for all three patents-in-suit.   Defendants' proposed construction is supported by the claim language and the teachings of the specification and provides clarity regarding the patentee's invention.   Thus, the Court does not need to look beyond the claim language and the specification to determine that a "signal type" is "a category of measurable variable input associated with the signal received from at least one user-selectable input device."

The parties agree, and the claims make clear, that a "signal type" is "a category of measurable variable input." *See* '078 patent, claims 1 and 9 ("wherein a signal type comprises a category, among a plurality of possible categories, of measurable variable input associated with at least one user-selectable input device"); '725 patent, claims 1 and 10 ("wherein a signal type comprises a category of measurable variable input associated with at least one user-selectable input device"); '725 patent, claim 15 ("wherein a signal type comprises distinct measurable variable input associated with at least one user-selectable input device").

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[5] The term "signal type" appears in the following asserted claims: Claims 1, 3, 9, 12, and 15 of the '078 patent; claims 1, 7, 10, 11, and 15-17 of the '725 patent; and claims 1 and 12-14 of the '415 patent.

The parties' only dispute is whether to clarify for the jury that "signal type" is associated with "**the signal received from** at least one user-selectable input device," as proposed by Defendants. Defendants' proposed construction gives meaning to the patentee's clear distinction between signal types and transmission types. Indeed, Defendant's construction clarifies for the jury that a "signal type" is associated with the signal, as opposed to the transmission. Moreover, Defendant's proposed construction clarifies that the claimed association between the measurable variable input and the user-selectable input device requires that the measurable variable input be received from the input device. Indeed, the specification makes clear that the "user input into the computer 100 via one or more input devices 106" results in a signal. '078 patent, 3:16-19. And the claims tell us that a "signal" must be "a set of related software-recognizable data of the same type **received from at least one input device**." '078 patent, claim 1; '725 patent, claims 1, 10, and 15 (emphasis added). Thus, the "measurable variable input" must be "received from the input device," such that a signal of a distinct signal type results at the termination of the input, or at the termination of the transmission. Accordingly, the Court should adopt Defendants' construction.

VI.   CONCLUSION

For the reasons above, Defendants respectfully request that the Court adopt their proffered constructions.

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above and foregoing document has

been served on all counsel of record via the Court's ECF system on April 8, 2014.

/s/ Fred I. Williams

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